

**DOCKET NO.:** EQB-0034  
**Application No.:** 10/521,087  
**Office Action Dated:** August 27, 2007

**PATENT**

**Amendments to the Drawings**

The attached sheet(s) of drawings includes changes to Fig(s) 1-10. The sheet(s), which includes Fig(s) 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10, replaces the original sheet(s) including Fig(s) 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10

Attachment: Replacement Sheet(s)

## **REMARKS**

After entry of the foregoing amendments, claims 1 to 23, 28, 29 and 32 will be pending in the application. Claims 24-27, 30 and 31, directed to unelected subject matter, have been canceled, without prejudice to pursuing same in one or more divisional applications. Applicants note that claim 32, since it is dependent on claim 1, is properly within the Group elected for prosecution, and ask that it be considered on the merits.

### ***Objections to the Specification and Drawings***

Although it is not clear to Applicants why the Abstract was found objectionable, a revised Abstract is submitted herewith. A clean copy of the amended Abstract is attached hereto.

Replacement figures 1-10 are provided herewith, together with requirements for submission of photographs. The photographs, and drawings, are all in black and white.

### ***Rejections Under 35 U.S.C. § 112, Second Paragraph***

Claim 8 is rejected for allegedly lacking antecedent basis for the term “the moderator band.” Applicants respectfully disagree with this rejection. As those of ordinary skill in the art would readily recognize, the “moderator band” is a band that stretches across the left ventricle, connecting with the left ventricular free wall and the ventricular septal wall. As such, it is an anatomical landmark, just as other terms within the claim, such as “free wall,” “endocardial edge” and “interventricular septum” are anatomical landmarks readily understood by those skilled in the art. Nonetheless, in the interest of advancing prosecution, Applicants have amended claim 8 in an attempt to clarify the claim and provide proper antecedent basis for each of these terms.

Claims 16 and 17 are rejected for lack of antecedent basis for the term “splenic cross sectional area.” These claims have been amended to depend from claim 15, instead of claim 12, thereby correcting an error in dependency and rendering the rejection moot.

Claims 18 to 20, 22, 23 and 29 are rejected because the term “X” is alleged to be unclear. Applicants have amended these claims to clarify that X means “times”.

Accordingly, withdrawal of the rejections under Section 112, second paragraph is respectfully requested.

***Art-Based Rejections***

Claims 1, 4, 5, 8 to 12, 15, 18, 21 and 28 are rejected as allegedly anticipated or rendered obvious by Young 1 (1999). The remaining claims (2, 3, 6, 7, 13, 14, 16, 17, 19, 20, 22, 23, 29 and 32) stand rejected as allegedly obvious over the combined teachings of Young 1 and Young 2 (2002).

Addressing the second rejection first, Applicants note that Young 2 is not prior art to the present invention. Specifically, as evident from the PubMed citation of Young 2, attached hereto as Exhibit I, it is evident that this article published in September of 2002. However, the instant application has an effective priority date of July 17, 2002, based on the filing of provisional application no. 60/396,592. Thus, Young 2 is not prior art to the instant application. Accordingly, withdrawal of all rejections relying on Young 2 is requested respectfully.

With regard to the rejections over Young 1 alone, Applicants have amended claim 1 to include the elements of claim 2, which was not rejected over Young 1. Since claim 1, as amended, defines over Young 1, all the remaining claims (which depend from claim 1) must also define over that reference.

In view of the foregoing, Applicants respectfully submit that all of the pending claims, as amended herein, are allowable over the art of record. Withdrawal of the rejections under 35 U.S.C. §§ 102 and 103 are therefore respectfully requested.

**CONCLUSION**

Applicants respectfully submit that the application is now in condition for allowance. Accordingly, a Notice of Allowance for all of pending claims 1 to 23, 28, 29 and 32 is earnestly solicited.

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If further issues remain, Applicants respectfully request a telephonic interview with their undersigned representative, who can be reached at (215) 564-8392.

Date: October 26, 2007

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## Exhibit I

1: Equine Vet J Suppl. 2002 Sep;(34):467-71.

Heart size estimated by echocardiography correlates with maximal oxygen uptake.

Young LE, Marlin DJ, Deaton C, Brown-Feltner H, Roberts CA, Wood JL.

Maximum oxygen uptake also appears to correlate to athletic performance in horses. In the Thoroughbred industry, there has long been an empirical theory that heart size is related to athletic performance, despite a lack of scientific evidence supporting this assertion. To investigate the relationship between peak oxygen consumption (VO<sub>2</sub>max) and cardiac size measured by echocardiography, guided M-mode and 2-dimensional echocardiography were performed in 17 conditioned Thoroughbreds with a range of VO<sub>2</sub>max from 126 to 217 ml/min/kg STPD (mean +/- s.d. 158 +/- 28 ml/min/kg). Horses were age 2-10 years and weighed 430-510 kg. Echocardiography was performed using a Vingmed System V echocardiograph with a 2.25 MHz phased array ultrasound transducer. All images were obtained from the right hemithorax using a short axis view of the left ventricle (LV) at the level of the chordae tendinae. All horses were free from significant regurgitation at the aortic or mitral valves. Maximal oxygen uptake was measured during a standardised incremental treadmill exercise test to fatigue. Maximal oxygen uptake was correlated significantly with LVIDd ( $r = 0.71$ ;  $P = 0.001$ ), MWT ( $r = 0.72$ ;  $P = 0.001$ ), LV mass ( $r = 0.78$ ;  $P = 0.0002$ ) and LV short-axis area ( $r = 0.69$ ;  $P = 0.003$ ). When indices of heart size were indexed to bodyweight, the correlation between VO<sub>2</sub>max and indices of heart size were LVIDd ( $r = 0.57$ ;  $P = 0.01$ ), MWT ( $r = 0.44$ ;  $P = 0.07$ ), LV mass ( $r = 0.78$ ;  $P = 0.0002$ ) and LV short-axis area ( $r = 0.69$ ;  $P = 0.003$ ). The current study suggests there is a strong relationship between VO<sub>2</sub>max and measurements of left ventricular size in Thoroughbred horses when individuals with a range of VO<sub>2</sub>max are compared.

PMID: 12405735 [PubMed - indexed for MEDLINE]

#### Related Links

Relationship between VO<sub>2</sub>max, heart score and echocardiographic measurements obtained at rest and immediately following maximal exercise in thoroughbred horses. [Equine Vet J Suppl. 1999] PMID:10659250

Cardiac responses to training in 2-year-old thoroughbreds: an echocardiographic study. [Equine Vet J Suppl. 1999] PMID:10659251

Two-dimensional echocardiography with a 15-MHz transducer is a promising alternative for in vivo measurement of left ventricular mass in mice. [J Am Soc Echocardiogr. 1999] PMID:9882781

Changes over time in echocardiographic measurements in young Standardbred racehorses undergoing training and racing and association with racing performance. [J Am Vet Med Assoc. 2005] PMID:15934256

Echocardiographic measurements of cardiac dimensions and indices of cardiac function in normal adult thoroughbred horses. [Equine Vet J Suppl. 1995] PMID:8933065